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Audio

FULL DETAILS AND TRANSCRIPT

Linking Formative Assessment to Benchmarks

Twin Groves Middle School, Illinois • May 2008

Topic: National Math Panel: Critical Foundations for Algebra

Practice: Mastery Framework

Highlights

- How teachers developed power standards
- Importance of "unwrapping" standards to ensure a shared understanding among teachers
- Example of a power standard—applying basic algebra concepts from 6th to 8th grades
- An approach to linking benchmarks with standards and assessment
- Why formative assessment should be used to plan instruction
- How teachers use a computerized assessment and reporting system
- Importance of sharing assessment data within and across grade levels

About the Site

Twin Groves Middle School

Buffalo Grove, IL

Demographics

83% White

15% Asian

2% Hispanic
1% Black
1% Free or Reduced-Price Lunch
2% English Language Learner

Staff from Twin Groves Middle School have been active participants in the district's processes of vertical alignment of standards and development of power standards features the following:

- Vertical alignment process to identify overlaps and gaps in curriculum,
- Development of power standards to guide curriculum and assessment,
- Specific standards for advanced and honors math,
- Analysis of power standards to develop well-aligned formative assessments,
- Use of computerized assessment and reporting system,
- Variety of types of formative assessments, including observation during in-class lessons, and
- Intervention options for struggling students.

Full Transcript

Hi, I am Cathy Alland. I teach 6th grade math at Twin Groves Middle School in Buffalo Grove, Illinois. The power standards were developed by the teachers at each grade level, at the two middle schools in our district. The process was initiated, by studying the learning standards, in what we have used for the past five years, called the curriculum framework. The curriculum framework was developed from the Illinois State Standards. The standards on this curriculum framework were first updated by these teachers to match our current course of study. We carefully analyzed each of the standards and then the teachers were able to narrow the list down to a shortlist of topics that we thought were key objectives. These objectives are currently known as our power standards. Within each power standard is a list of concepts that the students are expected to master, and these are our supporting standards. The questions from our district benchmarks were then linked to the power standards.

One of the power standards states that the students need to be able to apply basic algebra concepts. In the 6th grade, students are taught to solve simple one-step and two-step equations: They are expected to follow a specific format and they focus on keeping the equation balanced at all times. They are learning how to set-up and solve and check their work, in a format that's accepted in the 7th grade and 8th grade, and even at our high school, that they are going to feed into. In 7th grade, these skills are extended to include multi-step problem solving and graphing of linear equations. At this point, students are expected to have a deeper understanding of the material. They should recognize slope, intercepts, increasing and decreasing functions, and have the ability to interpret word problems. Then in 8th grade, the students progress further within the

same power standard. They are expected to solve and grasp polynomial equations.

This is Paul Louis. I am the Director of Curriculum and Instruction for School District 96 Kildeer. If I think about how standards and benchmarks are linked to our district assessments, we have a very, very strong connection. All of our district benchmark assessments, and again the district benchmark assessments are given at the end of each quarter or trimester, are linked directly to our power standards, the things that we think are the most important or the essential. We have linked each question, on each assessment, to each of our power or supporting standards. Our goal is to have between five and seven questions on each assessment for each standard that's being assessed during that benchmark. Assessment is part of instruction. It should be mostly formative in nature, and that it's there to help to modify or to change or to inform instruction. It certainly can help a teacher know where they will need to focus, where they can eliminate certain things, or where they need to spend extra time; so assessment really needs to be part of the entire instructional plan, that we need to know ahead of time what we are looking for. They are all based upon our power standards, and so we are able to clearly show the connection of what we are assessing is what we are going to be instructing about.

My name is Wendy Loeb, and I teach 8th grade math at Twin Groves Middle School in Buffalo Grove, Illinois. We have a mastery manager system that is a computerized system that stores all of our benchmarks and our standards. All of the questions, on our benchmarks, are linked to these standards. When we give our benchmark tests, the results are stored in the system, and the computer can tabulate the results for us. We can access reports which show us how our students performed on each standard. Two of the beneficial reports that we use are deficiency reports and an item analysis by learning objectives report. These allow us to see which students do not meet the individual standards. Based on this information, we can then determine the level of intervention the student requires.

We have four main ways that we share assessment information with other teachers: At the building level, we have grade level and building articulation with all of the math teachers; and we meet by grade level about once a week to discuss curriculum issues, common formative assessments, and teaching strategies. Then once a month, we meet as a multi-grade math department and at this time we can discuss the curriculum alignment, make sure we have a common vocabulary on all the topics taught at each grade. Also, about once a month we meet as a district in job-alike meetings, and this is where all of the 6th, 7th, and 8th grade math teachers at both of our middle schools can discuss the same issues that we have discussed at the building level, to ensure continuity within the district. This is also where we write and revise any of the quarterly benchmarks, and we link our test questions to the power standards. And then, we also meet weekly as a grade-level multi-department team, who all teach the same group of students. During these meetings, we discuss ways to incorporate concepts across the curriculum. So this year, for example, our emphasis was on writing; and in math, I used writing skills to help students explain their answers and procedures in solving math problems. This was a new step for them because they are not used to explaining their answers in that way, and our test results showed us that this had a positive impact on student learning.